

AMENDMENTS

In the Claims

Please amend the claims as follows:

1-177. (canceled)

178. (previously presented) A method comprising:

providing a nucleic acid, labeled with a unit specific marker, and
detecting, while the nucleic acid is moved relative to electromagnetic radiation by a
tethered polymerase, at least one FRET-independent fluorescent signal emitted from the unit
specific marker.

179. (currently amended) A method for detecting a unit specific marker bound to a nucleic
acid comprising

moving a nucleic acid ~~[[past]]~~ relative to electromagnetic radiation using a tethered
polymerase,

exposing a fluorescently labeled unit specific marker bound to the nucleic acid to
electromagnetic radiation, and

detecting an electromagnetic radiation signal from the fluorescently labeled unit specific
marker in the absence of fluorescence resonance energy transfer.

180. (previously presented) The method of claim 178, wherein the electromagnetic radiation
is transported through a waveguide.

181. (previously presented) The method of claim 179, wherein the electromagnetic radiation
is transported through a waveguide.

182. (previously presented) The method of claim 178, further including storing a signature
of signals.

183. (previously presented) The method of claim 182, wherein the electromagnetic radiation is transported through a waveguide.